"CASCO FOOT" IN THE FILIPINO

By GEORGE A. SKINNER

Away back in the obscurity of prehistoric times, someone in the archipelago which we call the Philippines built a boat for the navigation of the rivers of those islands. What the type of the primitive boat was is difficult to determine, perhaps, but from the lack of change that has characterized the people since anything has been known about them, one may assume that the modification in structure, if any has occurred, has been gradual and not greatly marked. The presence of certain peculiarities of the people who spend their lives on these boats attracted the attention of the writer soon after arriving in the Philippines, and the abnormal development of the feet especially interested him. There were but few opportunities to obtain photographs of the feet, but the accompanying illustration (pl. XIII, 2) shows a notable example.

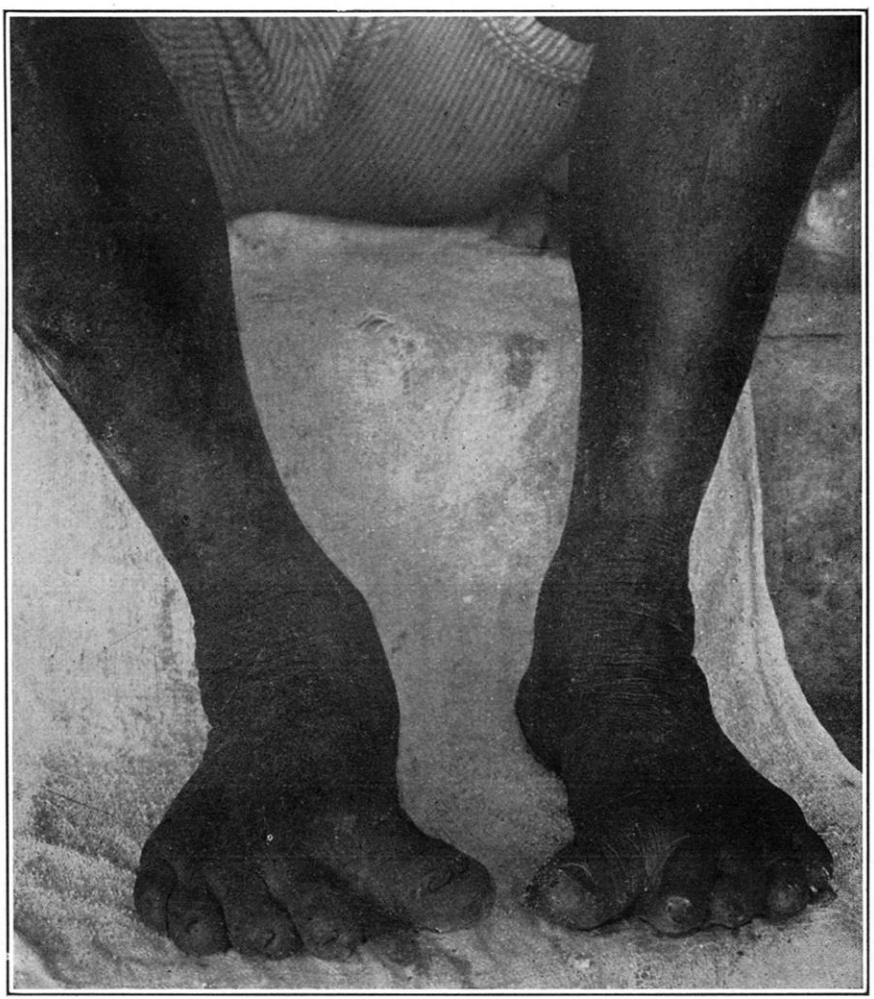
A brief description of the *cascos*, as these boats are called, may throw some light on the peculiar foot-development — deformity, one is tempted to call it,— but as such feet are very useful to their owners in plying their particular vocation, one must consider that feet of this formation are an attempt on the part of nature to adapt these people to their occupation.

The cascos, as observed in the northern and central parts of Luzon, vary in length from twenty to more than a hundred feet. This description applies to the river boats and not to the sea-going cascos. There are seven pieces in these cascos — a bottom plank, four side planks, the bow post, and the stern piece. Whatever the length of the boat, the planks forming the sides and bottom are always in single lengths, and this seems to limit their size, as I have never seen one with jointed planking. Along the edges of the planks, where they come in contact with the bottom or side pieces, a row of holes, about six or eight inches apart and nearly an inch in diameter, are bored, and by means of these holes the planks are

laced together with rattan thongs. Two of the side planks are somewhat narrower than the other two, and these are first laced to the bottom and to the bow post. Then the wider planks are laced to the ones last mentioned, forming an overlapping joint with the wider plank outside. The stern piece is then put in place and likewise secured by lacing. All the holes are then calked with cocoanut fiber, which is first dipped in pitch or tar, if the builders happen to have it. The general form of the casco is that of boats the world over. Their lines as a rule are graceful and they are surprisingly seaworthy. When the hull is completed, strong bamboo poles are placed across the upper surface of the upper plank, and the ends project about three feet over the side in the medium and large boats, proportionately less in the small ones. A boat about a hundred feet long usually approximates five feet deep, and these proportions are relatively maintained whether the casco is a large or a small one. To the projecting poles smaller bamboo poles are laced longitudinally, forming a running-board, on which the boatmen stand when pushing the craft up-stream. Across the running-board, at intervals of ten or twelve inches, are laced bamboo strips, against which the toes are braced when the boat is propelled. A covering, made of a variety of palm leaves, on light but strong bamboo frames, reaches nearly the whole length of the casco, thus protecting the occupants and cargo alike from sun and rain. At the stern is a small elevated platform, just high enough to enable the pilot, who stations himself at that point, to view the length of the vessel. A glance at the illustration (pl. XIII, 1) will probably make the description clearer.

To propel the casco the *bugadores* (boatmen) use long bamboo poles, one end of which is armed with a spike, while the other has a knob of polished wood which rests against the shoulder. When the start is to be made the men place these poles in position against the shoulder, then commence to push by walking toward the end of the casco. When the load is heavy, or the boat is being propelled up-stream, the effort required is very great, and under such circumstances both hands and both feet are used, the entire weight of the body and all the strength of each man resting on the knob of his pole, the other end of course resting on the bottom of

1. Filipino Bugadores at Work



2. Feet of a Filipino Bugador

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the river. The toes and hands both grasp the cross-pieces on the running-board, or the feet may even be elevated until they rest on the casco covering. The positions will be understood readily by noting the attitudes of the men represented in the photograph.

The second man has just commenced to push, the third one is well toward the middle of his exertion, while the fourth and the first ones are just completing a turn and are ready to walk toward the bow of the casco to start again. The third man is using both hands and both feet as mentioned above. The constant use of the toes in this work leads to a peculiar and very great development of the feet. The great toe is especially large and is separated from the other toes until it somewhat resembles a thumb. The prehensile properties of the toes is remarkable, not only in these casco men but in children and in the Filipinos in general. If they drop a small article they almost invariably pick it up with the toes and place it in the hand with the foot without stooping; indeed I have seen this done when a basket of eggs was balanced on the head.

The feet represented in the illustration were observed on a well-developed, middle-aged man, who had spent all his life on the cascos; but as we had no language in common I could not obtain his history, and it was with some difficulty that I persuaded him that no harm would come to him if he posed in front of the camera. The feet shown are quite typical of these boatmen, and although I saw many, this was the only one whom I had an opportunity to photograph. The skin of the bottom of the feet is of leathery hardness, for the feet are seldom covered except on occasion of great ceremony, and then only with sandals. The general muscular development of these men is often superb.

Another peculiarity of the casco-men is the development of what has the appearance of a fatty tumor on the shoulders, where the pole rests while they exercise all their strength against it; but they seem to suffer no inconvenience therefrom. A single effort made by a person unaccustomed to the task will at once demonstrate how necessary this protection is. The "tumor," or cushion, appears to develop soon after the work is begun in youth, and it remains throughout life with little or no change. I have ex-

amined these casco propellors in youth and in extreme age, but could detect no difference in this shoulder growth by the sense of touch. Whether it disappears after a man stops work I am unable to say from observation, although it probably would pass away to a large extent.

I have never observed the abnormal development of the feet in the children, hence it appears to be an occupation development and not hereditary. But, as mentioned above, the prehensile function of the toes takes place early in life, largely because the feet are unhampered by shoes.